

CLAIMS

1. System for transmitting a signal indicating the functioning condition of a tire,
the system co-operates with a device signalling the inflating condition of the tire,
5 wherein a movable group is found in a first loading position when the tire pressure is
higher than the pre-established value,
the movable group is found, on the contrary, in a second unloading position when the
tire pressure is lower than a pre-established value and, therefore, the tire is not suitable
for a standard use,
10 the movable group consisting of, at least, a sensor, an amplifier, a transducer and an
actuator,
the system is characterised by the fact that it is fitted with a switch commuting from a
first to a second condition which is opposite to the first one when the group passes
from the first loading position to the second unloading position to activate an
apparatus sending a warning signal picked up by a receiver .
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2. System for transmitting as in claims 1, wherein the receiver is located aboard the
vehicle.
3. System for transmitting as in claims 1, wherein the signalling device is fitted with a
first member for feeding energy for sending a warning signal.
- 20 4. System for transmitting as in claim 1, wherein the signalling device further comprises a
second member for feeding energy for carrying out the processing functions inside the
device.
5. System for transmitting as in claim 1, wherein the apparatus sends a signal indicating
the charge condition of the electric generators.
- 25 6. System for transmitting as in claim 1, wherein a first processing function of the
apparatus consists in the transmission, at pre-established time periods, of signals
indicating the own proper functioning condition.
7. System for transmitting as in claim 1, wherein, in order to save energy, the
transmission of the signal of the proper functioning condition of the apparatus, at pre-
30 established time periods, is not enabled when the group commutes the switch.

8. System for transmitting as in claim 1, wherein, in order to identify the tire in failure and to limit the probability to receive signals from the devices out of the own vehicle, every single apparatus uses an own identifying code.
9. System for transmitting as in claim 1, wherein the apparatus comprises a receiver; the receiver carries out a self-learning function to associate every single apparatus to the tire on which the apparatus is mounted; for this purpose the receiver associates the codes received according to the pre-fixed sequence to the pre-established position of any single wheel and it identifies the loading sequence.
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10. System for transmitting as in claim 1, wherein the signal of right functioning sent during the first loading is used by the receiver for the self-learning of the position of every single tire relating every single installed apparatus; it is, in fact, sufficient to follow a pre-established loading sequence of the mounted devices, the total number of which is equal to the number of wheels of the vehicle, eventually including the spare wheels.
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11. System for transmitting as in claim 1, wherein to associate every single apparatus to every single tire, a pre-established activation sequence is used; the first received code is associated to a first wheel, the second code to a second wheel, etc until the wheel n, being n the total number of wheels to be controlled.
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12. System for transmitting as in claim 1, wherein, in order to save energy, a movement sensor of the wheel is further provided in the apparatus, said sensor co-operating to prevent the transmission of the signal of the right functioning of the apparatus sent at pre-established time periods when the vehicle is stationary.
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13. System for transmitting as in claim 1, wherein the apparatus is fitted with an autonomous generator of electricity formed by a winding linked to a magnetic field.
- 25 14. System for transmitting as in claim 1, wherein the apparatus is fitted with an autonomous generator of electricity formed by a winding linked to a magnetic field consisting of a magnet fixed on the structure of the vehicle near the wheel.
15. System for transmitting as in claim 1, wherein the apparatus is fitted with a receiving circuit in order to obtain a bi-directional transmitting system capable of limiting the feeding of energy just when the vehicle is running.
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